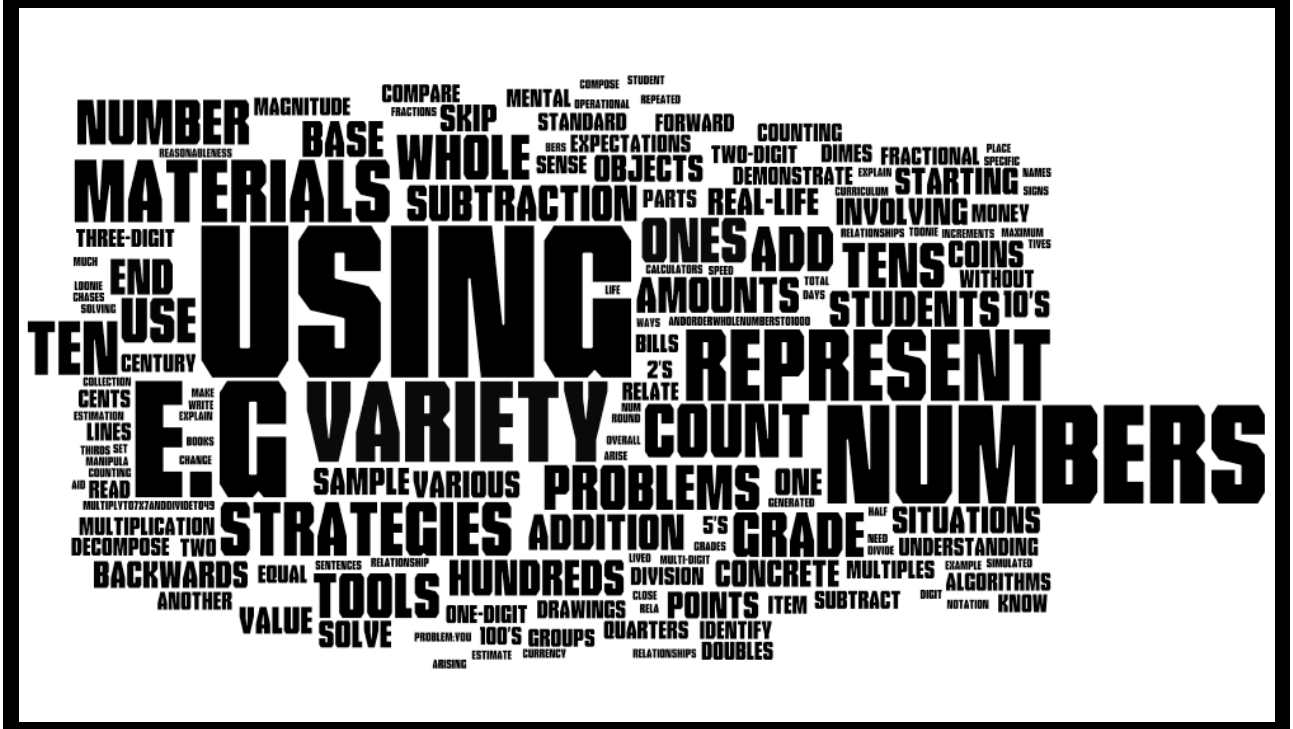
Consolidation of Grade 3 EQAO Questions



Number Sense and Numeration

Compiled by Devika William-Yu (SE2 Math Coach)

GRADE THREE EQAO QUESTIONS: Number Sense and Numeration

Overall Expectations

NV1	• read, represent, compare, and order whole numbers to 1000,and use concrete materials to represent fractions and money amounts to $10
NV2	• demonstrate an understanding of magnitude by counting forward and backwards by various numbers and from various starting points
NV3	• solve problems involving the addition and subtraction of single- and multi-digit whole numbers, using a variety of strategies, and demonstrate an understanding of multiplication and division

Year	NV1	NV2	NV3
Spring 2006	MC2 MC4 MC18 OR10	MC24	MC3 MC17 MC25 OR27
Spring 2007	MC22 MC23 OR8	MC2	MC3 MC4 MC5 MC31 OR30
Spring 2008	MC18 MC33	MC2 OR30	MC1 MC6 MC21 MC32 OR9
Spring 2009	MC2 MC18 OR8	MC1	MC4 MC6 MC21 MC32 OR28
Spring 2010	MC20 MC31	MC3 OR9	MC1 MC4 MC6 MC12 OR26
Spring 2011	MC6 MC34	MC5 OR7	MC2 MC3 MC4 MC22 OR10

GRADE THREE EQAO QUESTIONS: Number Sense and Numeration

Year	Knowledge & Understanding	Problem Solving (Thinking)	Application
Spring 2009	MC1 MC32	MC2 MC6 OR28	MC4 MC18 MC21 OR8
Spring 2010	MC1 MC31	MC6 MC20 OR9	MC3 MC4 MC12 OR26
Spring 2011	MC22 MC34	MC3 MC5 OR10	MC2 MC4 MC6 OR7

NUMBER SENSE AND NUMERATION

1. Quantity Relationships

Grade 2	Grade 3
Overall Expectation	
- read, represent, compare, and order whole numbers to 100, and use concrete materials to represent fractions and money amounts to 100¢	- read, represent, compare, and order whole numbers to 1000, and use concrete materials to represent fractions and money amounts to $10
Specific Expectations	
- represent, compare, and order whole numbers to 100, including money amounts to 100¢, using a variety of tools	- represent, compare, and order whole numbers to 1000, using a variety of tools
	- identify and represent the value of a digit in a number according to its position in the number
	- represent and explain, using concrete materials, the relationship among the numbers 1, 10, 100, and 1000
	- solve problems that arise from real-life situations and that relate to the magnitude of whole numbers up to 1000
- read and print in words whole numbers to twenty, using meaningful contexts	- read and print in words whole numbers to one hundred, using meaningful contexts
- determine, using concrete materials, the ten that is nearest to a given two-digit number, and justify the answer	- round two-digit numbers to the nearest ten, in problems arising from real-life situations
	- represent and describe the relationships between coins and bills up to $10
- estimate, count, and represent (using the ¢ symbol) the value of a collection of coins with a maximum value of one dollar	- estimate, count, and represent (using the $ symbol) the value of a collection of coins and bills with a maximum value of $10
- compose and decompose two-digit numbers in a variety of ways, using concrete materials	- compose and decompose three-digit numbers into hundreds, tens, and ones in a variety of ways, using concrete materials
- determine, through investigation using concrete materials, the relationship between the number of fractional parts of a whole and the size of the fractional parts	- divide whole objects and sets of objects into equal parts, and identify the parts using fractional names, without using numbers in standard fractional notation
- regroup fractional parts into wholes, using concrete materials	
- compare fractions using concrete materials, without using standard fractional notation	

2. Counting

Grade 2	Grade 3
Overall Expectation	
- demonstrate an understanding of magnitude by counting forward to 200 and backwards from 50, using multiples of various numbers as starting points	- demonstrate an understanding of magnitude by counting forward and backwards by various numbers and from various starting points
Specific Expectations	
- count forward by 1's, 2's, 5's, 10's, and 25's to 200, using number lines and hundreds charts, starting from multiples of 1, 2, 5, and 10	- count forward by 1's, 2's, 5's, 10's, and 100's to 1000 from various starting points, and by 25's to 1000 starting from multiples of 25, using a variety of tools and strategies
- count backwards by 1's from 50 and any number less than 50, and count backwards by 10's from 100 and any number less than 100, using number lines and hundreds charts	- count backwards by 2's, 5's, and 10's from 100 using multiples of 2, 5, and 10 as starting points, and count backwards by 100's from 1000 and any number less than 1000, using a variety of tools and strategies
- locate whole numbers to 100 on a number line and on a partial number line	

3. Operational Sense

Grade 2	Grade 3
Overall Expectation	
- solve problems involving the addition and subtraction of one- and two-digit whole numbers, using a variety of strategies, and investigate multiplication and division	- solve problems involving the addition and subtraction of single- and multi-digit whole numbers, using a variety of strategies, and demonstrate an understanding of multiplication and division
Specific Expectations	
- describe relationships between quantities by using whole-number addition and subtraction	- use estimation when solving problems involving addition and subtraction, to help judge the reasonableness of a solution
- solve problems involving the addition and subtraction of whole numbers to 18, using a variety of mental strategies	- solve problems involving the addition and subtraction of two-digit numbers, using a variety of mental strategies
- solve problems involving the addition and subtraction of two-digit numbers, with and without regrouping, using concrete materials, student-generated algorithms, and standard algorithms	- add and subtract three-digit numbers, using concrete materials, student-generated algorithms, and standard algorithms
– add and subtract money amounts to 100¢, using a variety of tools and strategies	- add and subtract money amounts, using a variety of tools, to make simulated purchases and change for amounts up to $10
- represent and explain, through investigation using concrete materials and drawings, multiplication as the combining of equal groups	- relate multiplication of one-digit numbers and division by one-digit divisors to real life situations, using a variety of tools and strategies
- represent and explain, through investigation using concrete materials and drawings, division as the sharing of a quantity equally	
	- multiply to 7 x 7 and divide to 49 ÷ 7, using a variety of mental strategies

GRADE THREE EQAO QUESTIONS: Number Sense and Numeration

Overall Expectation #1
Spring 2006

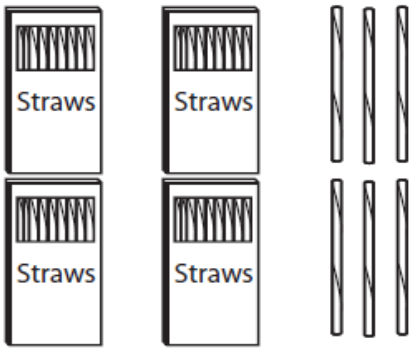
2 Britta uses estimation to solve the following problem.

$$\begin{array}{r} 82 \\ 28 \\ +\ 91 \\ \hline \end{array}$$

Which is closest to the sum?

- ○ 80 + 20 + 80
- ○ 80 + 20 + 90
- ○ 80 + 30 + 90 *
- ○ 80 + 30 + 100

18 The students in Ms. Hyde's class separate straws into boxes of 100. The model below shows how many boxes they make and the number of leftover straws.



What number is represented by the model shown?

- ○ 46
- ○ 64
- ○ 406 *
- ○ 460

GRADE THREE EQAO QUESTIONS: Number Sense and Numeration

Overall Expectation #1
Spring 2006

4 Nicholas and Valerie are counting money in math class. Nicholas has the coins shown below.

Valerie uses different coins to equal the amount of money Nicholas has.

Which could be the coins Valerie uses?

○ 

○ 

○ 

○ 

*

GRADE THREE EQAO QUESTIONS: Number Sense and Numeration

Overall Expectation #1
Spring 2006

10 Ryan is given the following problem to solve.

"There are 30 maple trees on a farm. Half the trees have been tapped for sap. What is the total number of trees that have been tapped for sap?"

Ryan gets an answer of 18 trees. Is his answer correct?

Explain your thinking.

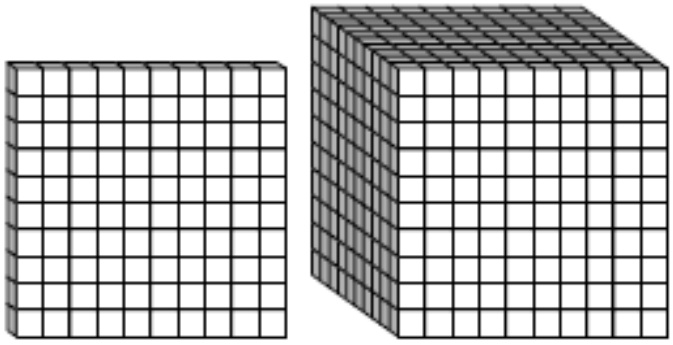
GRADE THREE EQAO QUESTIONS: Number Sense and Numeration

Overall Expectation #1
Spring 2007

22 Todd has some quarters, one dime and one nickel. The total value of the coins is $3.40. What is the total number of quarters Todd has?

- ○ 11
- ○ 12
- ○ 13
- ○ 14

23 In each of the models below, each ▢ represents 1.



Exactly how many hundreds are in one thousand?

- ○ 1
- ○ 10
- ○ 100
- ○ 1000

GRADE THREE EQAO QUESTIONS: Number Sense and Numeration

Overall Expectation #1
Spring 2007

8 Rafid has a group of 10 coins with a total value of $5. There are three different kinds of coins in his group.

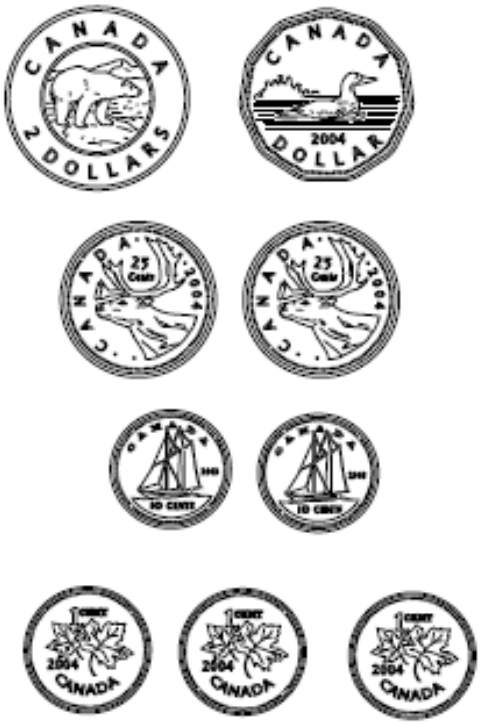
What could be the coins in Rafid's group?

Explain your answer.

GRADE THREE EQAO QUESTIONS: Number Sense and Numeration

Overall Expectation #1
Spring 2008

18 Consider the coins below.



Which of the following is equal to this amount of money?

- ○ 1 toonie, 1 loonie, 3 quarters, 3 pennies
- ○ 1 toonie, 16 dimes, 1 nickel, 3 pennies
- ○ 3 loonies, 1 quarter, 3 dimes, 3 pennies
- ○ 3 loonies, 6 dimes, 2 nickels, 3 pennies

GRADE THREE EQAO QUESTIONS: Number Sense and Numeration

Overall Expectation #1
Spring 2008

33 What does the digit 8 represent in the number 480?

- ○ 8 ones
- ○ 8 tens
- ○ 80 tens
- ○ 80 hundreds

GRADE THREE EQAO QUESTIONS: Number Sense and Numeration

Overall Expectation #1
Spring 2009

2 The school has 37 red skipping ropes and 45 blue skipping ropes.

Which number below is closest to the total number of skipping ropes the school has?

- ○ 75
- ○ 80
- ○ 85
- ○ 90

18 Which number is equal to 7 hundreds, 13 tens and 6 ones?

- ○ 637
- ○ 736
- ○ 836
- ○ 7136

GRADE THREE EQAO QUESTIONS: Number Sense and Numeration

Overall Expectation #1
Spring 2009

8 Ethan saves 11 quarters.

He wants to buy a book that costs $5.25.

How many more quarters does Ethan need to save to buy the book?

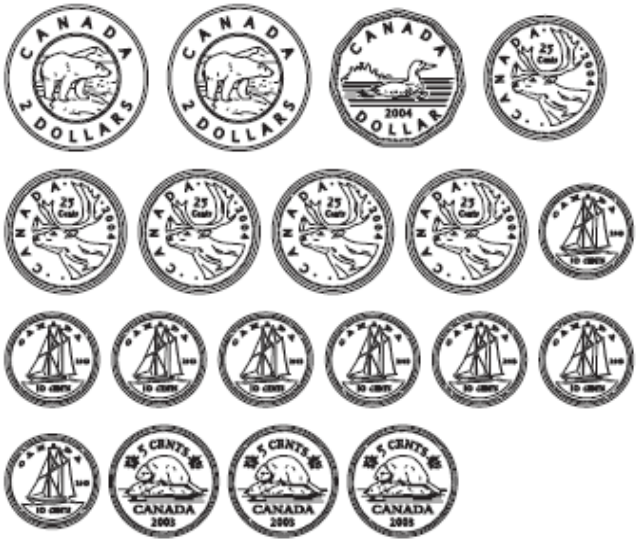
Justify your answer.

Ethan needs to save _____ more quarters.

GRADE THREE EQAO QUESTIONS: Number Sense and Numeration

Overall Expectation #1
Spring 2010

20 Susan has the coins below. She needs $8.00 to buy a book.



Which of the following sets of coins does Susan need to make a total of $8.00?

○ 

○ 

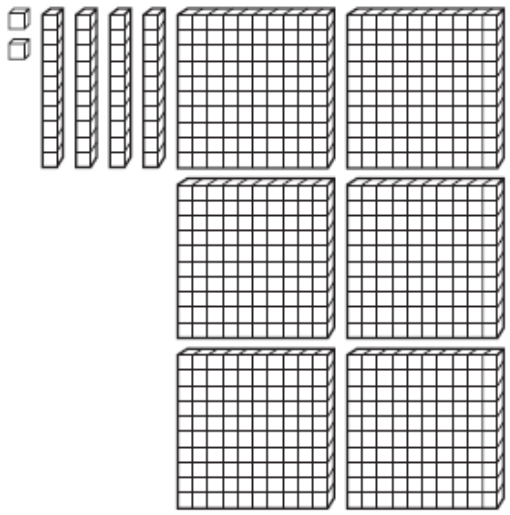
○ 

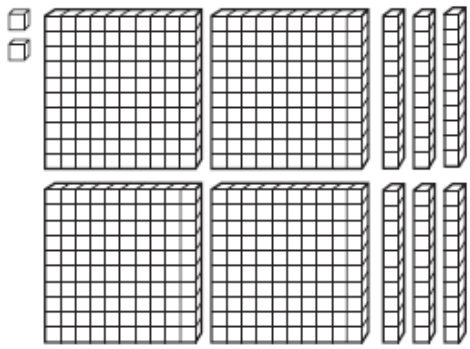
○ 

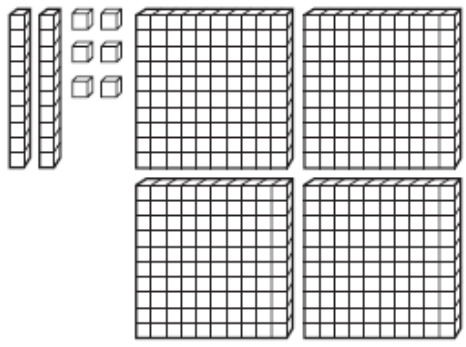
GRADE THREE EQAO QUESTIONS: Number Sense and Numeration

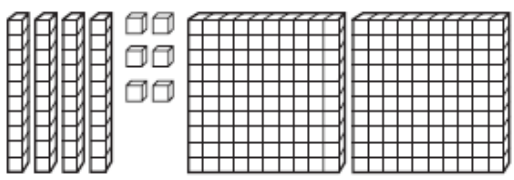
Overall Expectation #1
Spring 2010

31 Which of the following represents the number 246?

○ 

○ 

○ 

○ 

GRADE THREE EQAO QUESTIONS: Number Sense and Numeration

Overall Expectation #1
Spring 2011

6 Ozzy has 5 dollars in quarters.

How many quarters does he have?

- 4
- 5
- 20
- 25

34 Wilbur has 57 pattern blocks.

Which number is closest to the number of pattern blocks Wilbur has?

- 50
- 60
- 70
- 100

PRIMARY EQAO QUESTIONS: Number Sense and Numeration

Overall Expectation #2
Spring 2006

24 The number pattern below shows how Judy is counting aloud by 25s. She starts at 150 and counts by 25s.

150, 175, 200, 225, 250,

_____, _____

What will Judy's 7th number be?

- ○ 250
- ○ 275
- ○ 300 *
- ○ 325

Overall Expectation #2
Spring 2007

2 In the following number pattern, Celia is counting backward by 100s.

973, 873, 773, ___, ___

What will be the next two numbers in her pattern?

- ○ 573, 473
- ○ 673, 573
- ○ 763, 753
- ○ 772, 771

PRIMARY EQAO QUESTIONS: Number Sense and Numeration

Overall Expectation #2
Spring 2008

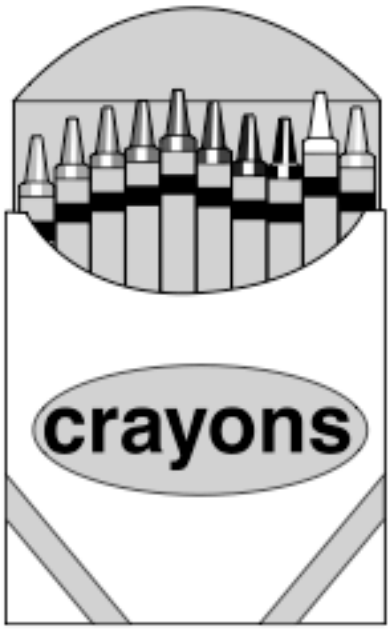
2 Which set of numbers shows counting backward by 5?

- ○ 710, 700, 690, 680
- ○ 625, 630, 635, 640
- ○ 525, 500, 475, 450
- ○ 990, 985, 980, 975

PRIMARY EQAO QUESTIONS: Number Sense and Numeration

Overall Expectation #2
Spring 2008

30 Mrs. Swan has 8 full boxes of crayons and 5 loose crayons.



She starts by counting the 5 loose crayons and then adds in each full crayon box like this: 5, 15, 25, 35, . . .

How many crayons does she have in total?

Explain your thinking.

Mrs. Swan has _____ crayons.

PRIMARY EQAO QUESTIONS: Number Sense and Numeration

Overall Expectation #2
Spring 2009

1 What are the missing numbers in the skip-counting pattern below?

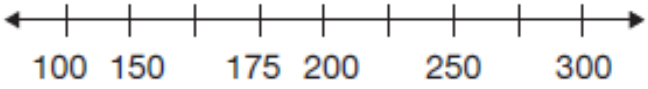
800, 825, 850, 875, ___, ___, ___, 975

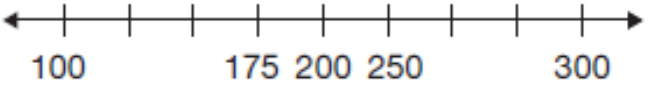
- ○ 885, 895, 905
- ○ 895, 900, 905
- ○ 900, 925, 950
- ○ 905, 930, 945

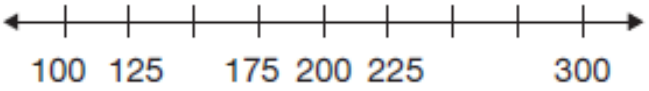
PRIMARY EQAO QUESTIONS: Number Sense and Numeration

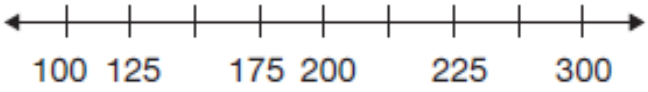
Overall Expectation #2
Spring 2010

3 Which number line is labelled correctly?

○ 

○ 

○ 

○ 

PRIMARY EQAO QUESTIONS: Number Sense and Numeration

Overall Expectation #2
Spring 2010

9 Miro gives away the same number of stickers each day.

On Day 1 he has 98 stickers.

On Day 2 he has 93 stickers.

On what day will he have exactly 63 stickers?

Show your work.

Miro will have exactly 63 stickers on Day _____.

PRIMARY EQAO QUESTIONS: Number Sense and Numeration

Overall Expectation #2
Spring 2011

5 Kyle has 325 trading cards.

He buys 7 more packages of trading cards. Each package contains 5 trading cards.

How many trading cards does Kyle have now?

- ○ 332
- ○ 337
- ○ 355
- ○ 360

PRIMARY EQAO QUESTIONS: Number Sense and Numeration

Overall Expectation #2
Spring 2011

7 A frog jumps a distance of 25 cm on each jump.

If the frog jumps 6 times, how far does it travel?

Show your work.

The frog travels _____ cm.

GRADE THREE EQAO QUESTIONS: Number Sense and Numeration

Overall Expectation #3
Spring 2006

3 Which of the following is another way to show 4×6?

- ○ $4 + 4 + 4 + 4$
- ○ $6 + 6 + 6 + 6$ *
- ○ $4 \times 4 \times 4 \times 4$
- ○ $6 \times 6 \times 6 \times 6$

17 Allan has 600 cards in his collection. Billy has 387 fewer cards in his collection than Allan.

How many cards does Billy have in his collection?

- ○ 987
- ○ 387
- ○ 323
- ○ 213 *

25 There are 28 students in Daniel's class. The list shows how all the students get to school each morning.

- 3 ride in cars.
- 4 walk.
- ? ride in buses.

What is the total number of students who ride in buses to get to school?

- ○ 7
- ○ 21 *
- ○ 24
- ○ 28

GRADE THREE EQAO QUESTIONS: Number Sense and Numeration

Overall Expectation #3
Spring 2006

27 The students in Mr. David's class are creating art projects. The chart shows the number of supplies needed to complete 1 art project.

Mr. David needs to buy enough supplies for 7 art projects. Complete the chart to show the total number of each kind of supplies Mr. David will need to buy.

Art Project Materials

Supplies	Number Needed for 1 Art Project	Total Number Needed for 7 Art Projects (Show and explain your work.)
Googly Eyes	2	
Pipe Cleaners	6	
Paper Plates	1	

GRADE THREE EQAO QUESTIONS: Number Sense and Numeration

Overall Expectation #3
Spring 2007

3 Jorge buys a ball for $1.15 and a skipping rope for $2.95.

He pays for the items with the money pictured above. How much change should Jorge receive?

- ○ $0.90
- ○ $1.00
- ○ $1.10
- ○ $1.90

GRADE THREE EQAO QUESTIONS: Number Sense and Numeration

Overall Expectation #3
Spring 2007

4 A group of 33 Grade 2 students and 48 Grade 3 students go to the zoo. What is the total number of students in the group?

- ○ 71
- ○ 80
- ○ 81
- ○ 91

5 $7 \times 6 = \square$

Which number can be placed in the box to make this number sentence true?

- ○ 49
- ○ 42
- ○ 36
- ○ 13

31 Anthony uses a mental strategy to solve the problem 48 + 37. In Step 1, he groups his tens together. In Step 2, he groups his ones together, as shown below.

Step 1	Step 2
40	8
+ 30	+ 7
70	15

Which should be Anthony's next step to complete his strategy?

- ○ 70 + 15
- ○ 70 + 37
- ○ 48 + 37
- ○ 48 + 15

GRADE THREE EQAO QUESTIONS: Number Sense and Numeration

Overall Expectation #3
Spring 2007

30 Steven earns $5 for every bundle of newspapers he delivers. He wants to buy a game that costs $18.

How many bundles of newspapers does Steven need to deliver to earn enough money to buy this game?

Show your work.

Steven needs to deliver _____ bundles of newspapers.

GRADE THREE EQAO QUESTIONS: Number Sense and Numeration

Overall Expectation #3
Spring 2008

1 Erik has 24 stamps. What is one way to put his 24 stamps into equal groups?

- ○ 3 groups of 6
- ○ 4 groups of 4
- ○ 5 groups of 6
- ○ 6 groups of 4

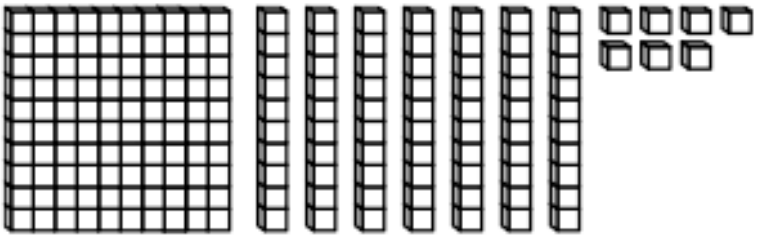
6 Ethan has 85 stamps in his collection. He gives away some of his stamps and has 67 stamps left. How many stamps does Ethan give away?

- ○ 18
- ○ 28
- ○ 142
- ○ 152

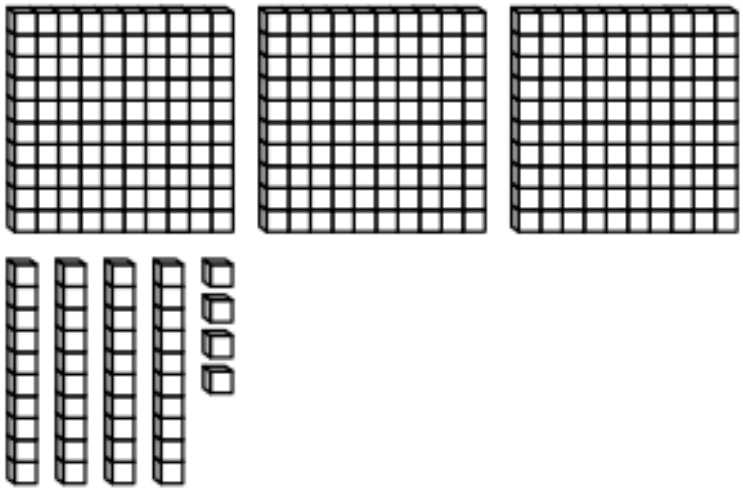
GRADE THREE EQAO QUESTIONS: Number Sense and Numeration

Overall Expectation #3
Spring 2008

21 In the following models, each ▫ represents 1.



Model 1



Model 2

What is the sum of the numbers represented by the models above?

- ○ 411
- ○ 421
- ○ 511
- ○ 521

GRADE THREE EQAO QUESTIONS: Number Sense and Numeration

Overall Expectation #3
Spring 2008

32 Matthew has these coins in his pocket.

Matthew has some other coins in his desk. Which coins are in his desk if he has a total of $5.80?

○ 

○ 

○ 

○ 

GRADE THREE EQAO QUESTIONS: Number Sense and Numeration

Overall Expectation #3
Spring 2008

9 Steven wants to buy a game that costs $9.00. These are the coins he has saved.

He does not have enough money to buy the game. What other coins does Steven need to reach $9.00?

Justify your answer.

GRADE THREE EQAO QUESTIONS: Number Sense and Numeration

Overall Expectation #3
Spring 2009

4 Susan and Danny are picking apples. Susan picks 274 apples and Danny picks 311.

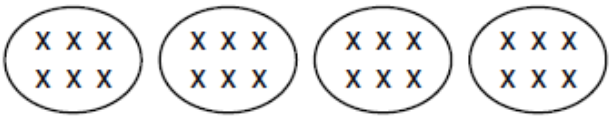
How many more apples does Danny pick than Susan?

- ○ 163
- ○ 143
- ○ 47
- ○ 37

21 Samir spends $7.25 at the store. How much change should he receive from $10.00?

- ○ $2.25
- ○ $2.75
- ○ $3.25
- ○ $3.75

32 Which number sentence describes the drawing below?



- ○ $1 \times 24 = 24$
- ○ $2 \times 12 = 24$
- ○ $4 \times 6 = 24$
- ○ $8 \times 3 = 24$

6 Marc receives $5 a week for walking a dog.

He wants to buy a video game that costs $42.

How many weeks will it take him to save enough money to buy the video game?

- ○ 5
- ○ 7
- ○ 8
- ○ 9

GRADE THREE EQAO QUESTIONS: Number Sense and Numeration

Overall Expectation #3
Spring 2009

28 A Grade 3 class wins a pizza party for reading the most books in September. There are 23 students in the class and each student will get 2 slices of pizza. If each pizza has 6 slices, how many pizzas should the class buy?

Show your work.

The class should buy _____ pizzas.

GRADE THREE EQAO QUESTIONS: Number Sense and Numeration

Overall Expectation #3
Spring 2010

1 Which number completes the following number sentence?

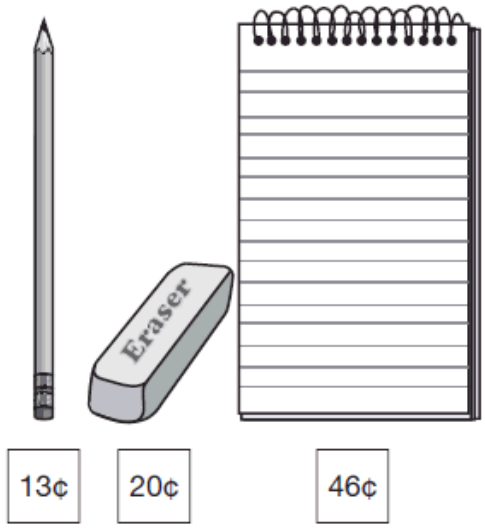
$$4 \times 6 = \square$$

- ○ 10
- ○ 20
- ○ 24
- ○ 28

4 An elementary school has a total of 635 students. There are 362 girls. How many boys are there?

- ○ 273
- ○ 333
- ○ 373
- ○ 997

6 Steve is buying the school supplies shown below.



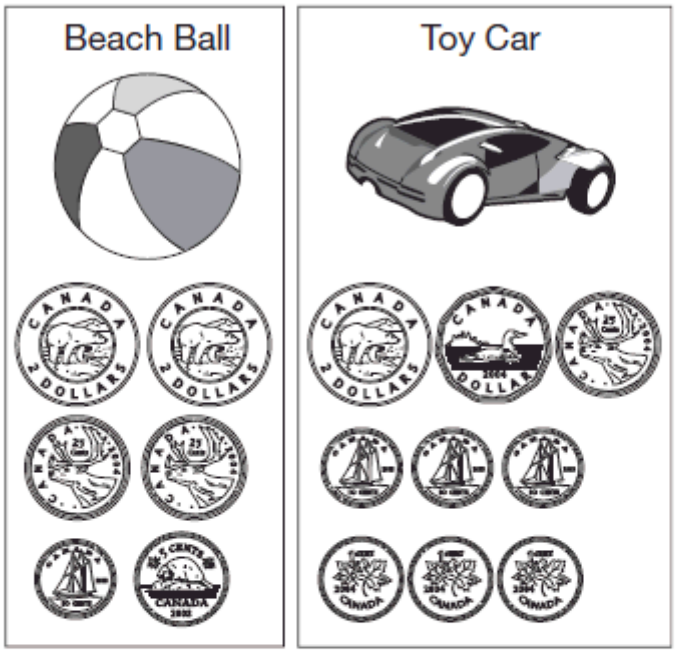
If Steve pays with a dollar, about how much change should he receive?

- ○ 10¢
- ○ 20¢
- ○ 70¢
- ○ 80¢

GRADE THREE EQAO QUESTIONS: Number Sense and Numeration

Overall Expectation #3
Spring 2010

12 Emily spends the money shown below on a beach ball and a toy car.



How much does she spend on these two items?

- ○ $7.13
- ○ $8.23
- ○ $8.43
- ○ $9.23

GRADE THREE EQAO QUESTIONS: Number Sense and Numeration

Overall Expectation #3
Spring 2010

26 Mr. MacDonald has 24 desks in his classroom.

Show 2 different ways he can arrange the desks into rows of equal length.

Write a division sentence for each way he can arrange the desks.

1
Division sentence: _____

2
Division sentence: _____

GRADE THREE EQAO QUESTIONS: Number Sense and Numeration

Overall Expectation #3
Spring 2011

2 Charlotte buys a book with the coins below.

Mrs. Reuben buys 3 of the same book.

How much money does Mrs. Reuben spend?

- ○ $1.68
- ○ $1.78
- ○ $2.47
- ○ $2.67

GRADE THREE EQAO QUESTIONS: Number Sense and Numeration

Overall Expectation #3
Spring 2011

3 Tim has 4 bags with 6 marbles in each bag. Vicki has 5 bags with 2 marbles in each bag.

How many more marbles does Tim have than Vicki?

- 24
- 20
- 14
- 10

4 Which of the following has the same value as 38 + 29?

- 40 + 30
- 30 + 20 + 7
- 30 + 20 + 17
- 40 + 20 + 8 + 9

22 Bob arranges 35 cubes in groups of 5. How many groups should he have?

- 5
- 6
- 7
- 8

GRADE THREE EQAO QUESTIONS: Number Sense and Numeration

Overall Expectation #3
Spring 2011

10 Ratna makes a table to show the number of seeds she collects in 3 days.

Day	Number of seeds collected
Monday	124
Tuesday	?
Wednesday	254

Ratna collects a total of 534 seeds.

How many seeds does she collect on Tuesday?

Show your work.

Ratna collects _____ seeds on Tuesday.